IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MASSACHUSETTS

SKYLINE SOFTWARE SYSTEMS, INC.,

Plaintiff,

CIVIL ACTION NO. 06-10980 DPW

v.

KEYHOLE, INC., and GOOGLE INC.

Defendants.

SEPARATE STATEMENT OF GENUINE ISSUES OF MATERIAL FACT IN OPPOSITION TO PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT OF VALIDITY

[PUBLIC REDACTED VERSION]

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SEPARATE STATEMENT OF GENUINE ISSUES OF MATERIAL FACT IN OPPOSITION TO SKYLINE'S VALIDITY SUMMARY JUDGMENT MOTION CASE NO. 06-10980 DPW

Google objects to Skyline's Statement of Undisputed Facts to the extent it does not comply with Civil L.R. 56.1's requirement that a moving party include a concise statement of material facts. Skyline improperly incorporates several propositions within a single statement of fact, and also includes voluminous immaterial facts.

Pursuant to Civil L.R. 56.1, Defendants Keyhole, Inc. and Google Inc. submit the following Statement of Genuine Issues of Material Fact in Opposition to Plaintiff's Motion for Summary Judgment of Validity. Pursuant to Civil L. R. 56.1, any statement that a fact is undisputed is made for the purposes of opposing this motion only.

SKYLINE'S ALLEGEDLY UNDISPUTED MATERIAL FACTS	GOOGLE'S RESPONSE
1.	This is not a material fact.
	To the extent that Skyline seeks to imply that claims 1 and 12 of the '189 patent are valid, Google disputes this fact. <i>See, e.g.</i> , Feiner SJ Decl. ¶¶ 50-85; Feiner Opp. Decl. ¶¶ 37-130; Chang Decl., Exs. 20-27, 31-35; Haight Decl., Exs. 9-18, 24-26, 28-30, 50-52; Mewes Decl., Exs. 2-5, 9.
2.	This is not a material fact.
·	To the extent that Skyline seeks to imply that claims 1 and 12 of the '189 patent are valid, Google disputes this fact. <i>See, e.g.,</i> Feiner SJ Decl. ¶¶ 50-85; Feiner Opp. Decl. ¶¶ 37-130; Chang Decl., Exs. 20-27, 31-35; Haight Decl., Exs. 9-18, 24-26, 28-30, 50-52; Mewes Decl., Exs. 2-5, 9.
3.	This is not a material fact and is not supported by admissible evidence.
	To the extent that Skyline seeks to imply that claims 1 and 12 of the '189 patent are valid, Google disputes this fact. <i>See, e.g.,</i> Feiner SJ Decl. ¶¶ 50-85; Feiner Opp. Decl. ¶¶ 37-130; Chang Decl., Exs. 20-27, 31-35; Haight Decl., Exs. 9-18, 24-26, 28-30, 50-52; Mewes Decl.,

UN	SKYLINE'S ALLEGEDLY NDISPUTED MATERIAL FACTS	GOOGLE'S RESPONSE
		Exs. 2-5, 9.
4.		This is not a material fact and is not supported by admissible evidence.
		To the extent that Skyline seeks to imply that claims 1 and 12 of the '189 patent are valid, Google disputes this fact. <i>See, e.g.</i> , Feiner SJ Decl. ¶¶ 50-85; Feiner Opp. Decl. ¶¶ 37-130; Chang Decl., Exs. 20-27, 31-35; Haight Decl., Exs. 9-18, 24-26, 28-30, 50-52; Mewes Decl., Exs. 2-5, 9.
5.	Except as set forth below, this is not a material fact and is not supported by admissible evidence.	
		Google does not dispute that the application for the '189 Patent was filed on February 26, 1999.
		To the extent that Skyline seeks to imply that the '189 patent is entitled to any earlier priority date, Google disputes this fact. <i>See</i> July 28, 2006 Plaintiff Skyline Software Systems, Inc.'s Responses to Defendants' Request for Admission No. 1 (Chang Decl., Ex. 35).
	To the extent that Skyline seeks to imply that claims 1 and 12 of the '189 patent are valid, Google also disputes this fact. <i>See, e.g.,</i> Feiner SJ Decl. ¶¶ 50-85; Feiner Opp. Decl. ¶¶ 37-130; Chang Decl., Exs. 20-27, 31-35; Haight Decl., Exs. 9-18, 24-26, 28-30, 50-52; Mewes Decl., Exs. 2-5, 9.	
6.	Prior to Skyline's invention, and as	Except as set forth below, undisputed.
	described in the '189 Patent, certain computer graphics methods for visualizing or displaying 3D images using locally stored 3D datasets were known. Because 3D data is voluminous, several prior art systems disclosed the use of data stored on a local disk or CD-ROM, not streamed from a remote server. <i>Id.</i> , col. 1:54-61.	To the extent that Skyline seeks to imply that these prior art systems obtained image data streamed from a remote server for use in rendering three-dimensional terrain, Google disputes this fact. See '189 patent, col. 1:54-61 & U.S. Patent No. 4,940,972.
	The state of the s	

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disk, however, was a difficult process because of the need to deliver from the disk to main memory the elevation data for the requested location and resolution to the renderer and then deliver the corresponding imagery to be correctly draped over the elevation in a real-time manner. Exh. 3 ('583 Patent).	Google disputes that providing data blocks with either image or elevation data from a local disk was a difficult process. <i>See</i> Feiner Opp. Decl. ¶¶ 34-35, 65-69, 107.
8. The streaming of video images of terrain was also known prior the '189 Patent. Exh. 1 ('189 Patent, col. 1:33-40).	Undisputed.
9. Internet video streams, however, were limited in the information provided and did not allow a user to probe interactively the streamed video images. <i>Id.</i> , col. 1:38-40.	Undisputed.
10. Because the amount of information required for the display of a large geographic area is enormous, this posed a particular problem when attempting to stream this data over the comparatively low-bandwidth Internet in an interactive, real-time manner. <i>Id.</i> , col. 1:54-61; col. 8:1-9.	Undisputed.
11. In general, the '189 Patent employs a hierarchically structured database with the original data (satellite photography and elevation data) processed such that each "area is described in a plurality of blocks at different resolution level." <u>Exh.</u> 1 ('189 Patent, col. 3:20-23; col. 14:47-54).	This is not a material fact.
12. The Court has construed the claim phrase "data blocks belonging to a hierarchical structure" as "data blocks that are organized into multiple levels of resolution, whereby each level contains data blocks at the same	Undisputed.

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resolution, and each successive level contains data blocks of a higher resolution than those in the preceding level." Exh. 5 (Mar. 24, 2006 Order, p. 15).	
13. The hierarchical structure is a result of the processing and related organization of the three-dimensional elevation data blocks, as described in detail in the '189 Patent. Exh. 1 ('189 Patent, col. 9:5-63).	This is not a material fact and is not supported by admissible evidence. Google also disputes that the hierarchical structure is the result of the processing and related organization of <i>the three dimensional elevation data blocks</i> as the preferred embodiment in the '189 patent does not have "three dimensional elevation data blocks." <i>See, e.g.</i> , '189 patent, col. 8:32-36.
14. Blocks in lower resolution levels include less detail per unit area, while the blocks in higher resolution levels include more detail per unit area. <i>Id.</i> , col. 3:4-9.	This is not a material fact.
eliminating data points from the data (such as USGS elevation maps and satellite photographs), so that substantially for each block of lower resolution, one block covers the same area as four blocks in the level above. <i>Id.</i> , col. 9:7-13.	This is not a material fact.
16. One of the most commonly used hierarchical data structure is known as a "quad tree," which provides the indexing structure for the "parentchild" data blocks. Exhs. 36 (Jul 10, 2006 Manocha Rpt., ¶¶ 25, 29) & 38 (Dec. 8, 2006 Manocha Rpt., pp. 7-8).	This is not a material fact and is not supported by admissible evidence. The cited reference makes no disclosures regarding the '189 patent. To the extent Skyline seeks to imply that the '189 patent discloses or claims a quad tree, Google disputes this fact. See e.g. '189 patent at col. 9:40-45 (no disclosures regarding a quad tree data structure), claims 1-24 (no claims directed to quad trees).
17.	This is not a material fact and is not supported by admissible evidence.

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	To the extent Skyline seeks to imply that the '189 patent discloses or claims a quad tree, Google disputes this fact. See e.g. '189 patent at col. 9:40-45 (no disclosures regarding a quad tree data structure), claims 1-24 (no claims directed to quad trees).
	To the extent Skyline seeks to imply that its TerraBuilder product is an embodiment of the '189 patent, Google disputes this fact. <i>See e.g.</i> '189 patent, claims 1-24 (no claims directed to processing data and building databases).
	This is not a material fact.
19.	This is not a material fact.
20. The '189 Patent focuses on the streaming of three-dimensional terrain representations stored remotely that are requested by the local user or	This is not a material fact. To the extent that Skyline seeks to characterize claims 1 and 12, Google disputes this

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computer, and streamed from the remote database. Three-dimensional data include at least three (typically, an x, y, and z) dimensions. Two-dimensional data (such as from a photograph), in contrast, provide only two dimensions (typically, x and y) and provide only a flat, photo-realistic representation. Three-dimensional data enable a viewer to visualize or experience the contours of the geographic area in three dimensions, <i>i.e.</i> , including elevations of the area, particularly when the view is at an oblique angle to the Earth's surface. Exh. 1 ('189 Patent, Fig. 7; col. 2:50-54; col. 6:51-54; col. 16:9-12, 18).	characterization. See '189 patent, cls. 1, 12; see also Chang Decl., Exs. 4-5; Feiner Opp. Decl. ¶¶ 32-33.
21. Two dimensional representations are often viewed in an "orthographic" or straight down view. Exhs. 39 (Dec. 22, 2006 Manocha Rpt., ¶ 23, n.2) & 46 (Lau Dep., p. 304).	Except as set forth below, undisputed. To the extent that Skyline is suggesting that three-dimensional representations cannot be viewed in an "orthographic" or straight down view, this is not supported by the cited evidence. See also, e.g., Google Earth application (available at http://earth.google.com/).
A. Claims 1 and 12 of the '189 Patent	
22. Claim 1 reads as follows: A method of providing data blocks describing three-dimensional terrain to a renderer, the data blocks belonging to a hierarchical structure which includes blocks at a plurality of different resolution levels, the method comprising:	Undisputed.
receiving from the renderer one or more coordinates in the terrain along with indication of a respective resolution level;	

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providing the renderer with a first data block which includes data corresponding to the one or more coordinates, from a local memory;	
downloading from a remote server one or more additional data blocks at a resolution level higher than the resolution level of the first block which include data corresponding to the one or more coordinates if the provided block from the local memory is not at the indicated resolution level.	
Exh. 1 ('189 Patent, col. 16:28-43).	
23. Claim 12 provides that:	Undisputed.
Apparatus for providing data blocks describing three-dimensional terrain to a render, the data blocks belonging to a hierarchical structure which includes blocks at a plurality of different resolution levels, the apparatus comprising:	
a local memory which stores data blocks corresponding to coordinates proximal to a current viewpoint of the renderer;	
a communication link, through which the memory receives the data blocks from a remote server;	
a processor which receives one or more specified coordinates along with indication of a respective resolution level from a renderer, provides the renderer with the first data block which includes data corresponding to the one or more specified coordinates from a local memory and downloads over the communication link one or more data blocks or resolution level higher than the resolution level of the first data block which include data corresponding to the one or more	

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coordinates if the first block is not from the indicated level.	
<i>Id.</i> , col. 18:12-31.	

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B.1. The Prior Art Relied Upon By Google - TerraVision

24. TerraVision was developed between 1993-1996 as part of the Multidimensional Applications and Gigabit Internet work Consortium ("MAGIC") funded by the U.S. Defense Advanced Research Projects Agency ("DARPA") as a means to test the private MAGIC gigabit network. A design goal of the TerraVision application, unlike Skyline's invention, was to enable a battlefield commander to view one large area (such as fort Irwin, California), and not necessarily the entire United States or the world. See, e.g., Exhs. 12 (Dep. Exhs. 90, p. 1); 13 (Dep. Exh. 91, p. 1) & 14 (Dep. Exh. 92, p. 1).

Disputed.

Google does not dispute that the TerraVision application was developed between 1992-1996 as part of the MAGIC project, or that this project was funded by DARPA. Otherwise, Google disputes Skyline's characterizations of TerraVision and the MAGIC network as well as its conflation of the TerraVision prior art references. See, e.g., Chang Decl. Ex. 21 at GOOG 358, 362, 369 & Ex. 22 at GOOG 348-50; see also Haight Decl., Exs. 12-14; Feiner Opp. Decl. ¶ 37.

- 25. Initially, TerraVision was designed to provide only a 2D visualization, as the system provided for the use of only color (i.e., aerial or satellite photography) data. Exh. 13 (Dep. Exh. 91 (Apr. 1993 Quarterly Rpt., p. 3)).
- Disputed.

Google disputes Skyline's characterizations of TerraVision as well as its conflation of the TerraVision prior art references. See, e.g., Chang Decl., Ex. 21 at GOOG 358 & Ex. 22 at GOOG 350; see also Haight Decl., Ex. 12 at pp. 1, 8, & Ex. 13 at pp. 1, 3.

26. Elevation data was later added to the system, but was loaded locally from a disk into local memory rather than streamed over a network from a remote server. Exh. 14 (Dep. Exh. 92 (Jul. 1993 Quarterly Rpt., p. 2)).

Disputed.

Google disputes Skyline's characterizations of TerraVision as well as its conflation of the TerraVision prior art references. See, e.g., Chang Decl., Ex. 21 at GOOG 362-64 & Ex. 22 at GOOG 350-51; see also Haight Decl., Ex. 18 at p. 4; Chang Decl., Ex. 23 at GOOG 373, 388 & Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. Decl. ¶ 59.

fit in local memory." Exh. 10 (Dep.

references. See, e.g., Chang Decl., Ex. 21 at

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Exh. 87 (Technical Note 540, p. 18).	GOOG 362-64 & Ex. 22 at GOOG 350-51; see also Haight Decl., Ex. 18 at p. 4; Chang Decl., Ex. 23 at GOOG 373, 388 & Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. Decl. ¶ 59.
30. Not until the very last quarterly report	Disputed.
in July 1995 did SRI proclaim that the TerraVision application had the "ability for the DEM tiles to be read off the ISS [image server] when the user selects a data set" Exh. 24 (Dep. Exh. 200 (GOOG 26612 at 3)).	The April 1995 Quarterly report states that "DEM tiles are requested from the ISS." Haight Decl., Ex. 18 at p. 4; <i>see also</i> Chang Decl., Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. Decl. ¶ 59.
31. "All the DEM tiles are requested from	Disputed.
the ISS and kept within the local cache when a user selects a data set. The cache is cleaned when the user selects a new data set." <i>Id.</i> "DEM tiles" refer to the digital elevation model tiles that contain the elevation or terrain data. Exhs. 14 (Dep. Exh. 92 (Jul. 1993 Quarterly Rpt., p. 2 (GOOG 0026485)), 37 (Aug. 11, 2006 Manocha Rpt., ¶¶ 25-32) & 39 (Dec. 22, 2006 Manocha Rpt., ¶¶ 19-20).	Google does not dispute that in the TerraVision application DEM tiles were downloaded from a remote server during initialization, before the OI tiles. It also does not dispute that DEM tiles refer to digital elevation model tiles. Otherwise, Google disputes Skyline's characterizations of TerraVision as well as its conflation of the TerraVision prior art references. <i>See</i> , <i>e.g.</i> , Chang Decl., Ex. 21 at GOOG 362-64 & Ex. 22 at GOOG 350-51; <i>see also</i> Haight Decl., Ex. 18 at p. 4; Chang Decl., Ex. 23 at GOOG 373, 388 & Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. Decl. ¶ 59.
32. In short, the TerraVision application	Disputed.
required that all elevation data for each geographic area (<i>e.g.</i> , Fort Irwin, California, Yosemite Park, etc.) be downloaded before the application could be run. <i>Id.</i> , ¶¶ 20-31; <u>Exh.</u> 24 (Dep. Exh. 200 (GOOG 26612 at 3)).	Google does not dispute that in the TerraVision application DEM tiles were downloaded from a remote server during initialization, before the OI tiles. Otherwise, Google disputes Skyline's characterizations of the TerraVision application. <i>See</i> Chang Decl., Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. Decl. ¶¶ 59, 65-69.
33. Unlike Skyline's patented method of	Disputed.
streaming elevation data as needed, TerraVision stored all the DEM tiles remotely, transferring them only en masse to the client. Google's technical expert, Dr. Feiner, admitted this fact at his recent deposition:	Google does not dispute that in the TerraVision application DEM tiles were downloaded from a remote server during initialization, before the OI tiles. It also does not dispute that Skyline has correctly quoted Dr. Feiner's testimony to that effect. Otherwise, Google disputes

SKYLINE'S ALLEGEDLY **GOOGLE'S RESPONSE** UNDISPUTED MATERIAL FACTS Skyline's characterizations of the patent and of Q. Did TerraVision have a process in TerraVision as well as its conflation of the which it downloaded its elevation TerraVision prior art references. See, e.g., data first, the complete elevation Chang Decl., Ex. 21 at GOOG 362-64 & Ex. 22 data, and then begin downloading at GOOG 350-51; see also Haight Decl., Ex. 42 the imagery? at p. 41; Chang Decl., Ex. 23 at GOOG 373, A. In TerraVision, the elevation data 388 & Exs. 20, 34; Feiner SJ Decl. ¶¶ 53, 61, was downloaded prior to the 78; Feiner Opp. Decl. ¶ 59. imagery data. Q. The complete elevation data for whatever portion of the earth was being looked at, such as Fort Irwin. A. That's true. Exh. 42 (Feiner Dep., p. 41). **34.** The source code for the TerraVision Disputed. application further confirms that it did Google does not dispute that the source code for not use Skyline's claimed method for the TerraVision application contains the fetching 3D terrain from a remote function TsReadDems() and that Skyline has server. In particular, the source code correctly quoted a comment to this function. (TsReadDEMs() at TsTileStruct.c) Otherwise, Google disputes Skyline's contains the following remark: characterizations of the patent and of the TerraVision application, particularly to the Read the DEM files from the fileserver. This is a hack until we can get the extent it suggests that the TsReadDems() TSM to send us the DEMs. This function was called during the normal operation function reads the DEM files of the application. See Chang Decl., Exs. 20, corresponding to the data set id passed 34; Feiner SJ Decl. ¶¶ 53, 61, 78; Feiner Opp. in as a parameter and fills the tile tables Decl. ¶ 59. with the DEMs. Exh. 25 (Dep. Exh. 213 (GOOG 0026843)). **35.** Another note in the source code states: Disputed. "DO WE WANT TO DO CHEESY Google does not dispute that the source code for LOCAL DEMS." Exh. 26 (Dep. Exh. the TerraVision application contains the 219 (GOOG 0026915-16). function TerraVisionInitDataSet() and that Skyline has correctly quoted a comment to this function. Otherwise, Google disputes Skyline's characterizations of the TerraVision application, particularly to the extent it suggests that the TsReadDems() function was called to get the "CHEESY LOCAL DEMS" during the normal

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	as well as its conflation of the T_Vision prior art references. Haight Decl., Ex. 51 (Mayer patent at col. 5:61-66, 6:12-21 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 96-97.
40. The T_Vision references describe a	Disputed.
third level of network connectivity that consists a plurality of local input and display devices. <i>Id.</i> , col. 5:63-64.	Google does not dispute that the system described in the Mayer patent has one or more display units 5 and input mediums 10. Otherwise, Google disputes Skyline's characterizations of the Mayer patent as well as its conflation of the T_Vision prior art references. Haight Decl., Ex. 51 (Mayer patent at col. 5:61-66, 6:12-21 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 96-97.
41. The first level of spatially distributed	Disputed.
data sources store data, preferably in the vicinity of the spatial area at issue. <i>Id.</i> ,col. 2:51-56.	Google does not dispute that the spatially distributed data sources described in the Mayer patent are preferably located in the vicinity of the spatial area at issue. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 2:51-56, 5:61-66, 7:1-3 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 96-97.
42. These data sources appear to provide	Except as set forth below, undisputed.
local data, such as political and meteorological data, and even remote video streams. <i>Id.</i> , col. 6:33-44; col. 7:1-3, col. 9:17-18.	To the extent that Skyline seeks to imply that the data sources described in the Mayer patent are limited to political and meteorological data or remote video streams, Google disputes this fact. <i>See</i> , <i>e.g.</i> , Haight Decl., Ex. 51 (Mayer patent at col. 6:33-44, 7:10-29, 9:37-40); Feiner Opp. Decl. ¶ 80.
43. The distributed data sources are	Disputed.
connected via a collecting network to "central memory nodes." <i>Id.</i> , Fig. 1 (item 1, 2 and 3, identified as the "central memories"); col. 6:5-6.	Google does not dispute that the distributed data sources described in the Mayer patent are connected via a collecting network to node 1. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 6:12-21 & Figs. 1-2 (nodes 2 and 3 connected via

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	interchange network to node 1, but not connected to collecting network)).
44. The central memory nodes are interconnected via a high-speed interchange network with permanent connections. <i>Id.</i> , Fig. 1 (item 7); col. 6:3-21, 53-55.	Undisputed.
45. Central memory nodes are then	Except as set forth below, undisputed.
connected via a high speed supply network (identified as item 8 in Figure 1) to local input and display devices. <i>Id.</i> , Fig. 1 (item 5).	To the extent that Skyline seeks to imply that node 3 has a connection to more than one display unit 5, Google disputes this fact. <i>See</i> , <i>e.g.</i> , Haight Decl., Ex. 51 (Mayer patent at col. 6:19-21).
46. The specification of the Mayer Patent	Disputed.
describes a system in which the input device (identified in Figure 1 as item 5) is used to select a view. <i>Id.</i> , col. 5:58-68, 6:1-55.	Google does not dispute that the system described in Mayer patent has an input medium 10, such as a track ball or space-mouse (identified in Figure 2, but not Figure 1), and that the user uses this input medium to navigate the terrain. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 6:64-7:7 & Figs. 1-2).
47. The central memory node receives the	Disputed.
information request from the input device over the high-speed network (item 8) and may request certain data over the permanent high speed collecting network (item 7) from the distributed data sources (item 4). <i>Id.</i> , Fig. 1; col. 6:33-35.	Google does not dispute that in the system described in the Mayer patent the input medium 10 is connected to node 3 (an SGI Onyx computer in the preferred embodiment), and that part of this node 3 computer will calculate the coordinates in the terrain and an indicated resolution level. To the extent that data blocks corresponding to these coordinates and resolution level are not already available in the local memory of node 3, this node 3 computer will request additional data blocks from node 1 via the interchange network 7. Node 1 will in turn request the data from distributed data sources 4 via the collector network 6. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight

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	Decl., Ex. 51 (Mayer patent at col. 6:64-7:7, 7:42-54, 8:28-42 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 85, 92, 95-97, 103-04.
48. The data is sent back from the various	Disputed.
distributed data sources to the various central memory nodes. <i>Id</i> .	Google does not dispute that in the system described in the Mayer patent, data from distributed data sources is sent back to node 1 (the only node connected to the collector network 6), and that this data is in turn sent back by node 1 to node 3 via the interchange network. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 6:64-7:7, 7:42-54, 8:28-42 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 85, 92, 95-97, 103-04.
49. The central memory nodes then collect	Disputed.
the data over the high-speed interchange network. <i>Id.</i> , col. 6:48-49.	Google does not dispute that in the system described in the Mayer patent, data from distributed data sources is sent back to node 1 (the only node connected to the collector network 6), and that this data is in turn sent back by node 1 to node 3 via the interchange network. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 6:64-7:7, 7:42-54, 8:28-42 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 85, 92, 95-97, 103-04.
50. The data or image from the central	Disputed.
memory nodes are sent to the display device over the high-speed supply network and the image is then displayed by the display device (item 5). <i>Id.</i> , col. 6:58-60; 7:42-44.	Google does not dispute that in the system described in the Mayer patent, data blocks stored in the central memory of node 3 (its "local memory") are provided to the renderer in node 3 for rendering and that the rendered view is then displayed on the display unit 5. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at col. 3:20-50, 6:64-7:7, 7:42-54, 8:28-42 & Figs. 1-2); Feiner Opp. Decl. ¶¶ 85, 92, 95-97, 103-04.

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51. The T_Vision system, and the documents discussing this system, at best, contain only vague references to the data used to describe the terrain. The documents almost exclusively contain a discussion of the "high resolution satellite images," <i>i.e.</i> , texture or image data – not elevation data. <i>Id.</i> , col. 7:10-61.	Disputed. Google disputes Skyline's characterizations of the Mayer patent as well as its conflation of the T_Vision prior art references. Haight Decl., Ex. 51 (Mayer patent at Abstract, col. 1:7-10, 4:36-38, 8:14-17, 8:56-57, 9:18-43); Mewes Decl., Ex. 2 (TERRA_S.mpeg & BERLIN.mpeg); id., Ex. 3 (TVISION.HTL at p. 1 & (TERRABAS.HTM at p. 1); id., Exs. 4-5; Feiner Opp. Decl. ¶¶ 78-80.
52. The very first sentence of the Mayer Patent states that its focus is on two-dimensional, as opposed to three-dimensional, data. The Patent states: the "invention relates to a method and a device for pictorial representation of space-related data, particularly geographical data of <i>flat</i> or physical objects." <i>Id.</i> , col. 1:5-7.	Disputed. Google does not dispute that Skyline correctly quotes the Mayer patent. Otherwise, Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at Abstract, col. 1:7-10, 4:36-38, 8:14-17, 8:56-57, 9:18-43); Mewes Decl., Ex. 2 (TERRA_S.mpeg & BERLIN.mpeg); <i>id.</i> , Ex. 3 (TVISION.HTL at p. 1 & (TERRABAS.HTM at p. 1); <i>id.</i> , Exs. 4-5; Feiner Opp. Decl. ¶¶ 78-80.
53. The Mayer Patent further describes the system as: "particularly suitable for spherical objects, where surface is imaged two-dimensionally." Id., col. 3:66-7 (emphasis added); see also id., col. 4, 11.1-2; col. 4:43-44 (stating that "[p]articularly simple is the display of height information by the application of various colors"); col. 7:10-13 ("a two dimensional polygraph grid model is used to display the data, which serves as a two-dimensional coordinate system for positioning the data"); col. 9:22-23 ("a two dimensional topographic grid network was selected as a representational model").	Except as set forth below, undisputed. To the extent that Skyline seeks to imply that these citations refer only to the rendering of two-dimensional images, Google disputes this fact. See, e.g., Feiner Opp. Decl. ¶ 80
54. The Mayer Patent makes only passing reference to height or elevation data; height information is discussed as	Disputed. Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer

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being displayed by the application of various colors or shading. <i>Id.</i> , col. 4:43-46.	patent at Abstract, col. 1:7-10, 4:36-38, 8:14-17, 8:56-57, 9:18-43); Feiner Opp. Decl. ¶ 80.
55. The Mayer Patent has only scant discussion of whether or how the system uses elevation data and no disclosure of whether elevation data is downloaded in real-time in a lower-to-higher resolution method, as required by the '189 Patent. Exh. 51 (Mayer Patent).	Disputed. Google disputes Skyline's characterizations of the Mayer patent. Haight Decl., Ex. 51 (Mayer patent at Abstract, col. 1:7-10, 2:17-29, 4:36-38, 7:45-59, 8:14-17, 8:56-57, 9:18-43); Feiner Opp. Decl. ¶¶ 80, 103-04.
56. Google also cites certain documents describing the T_Vision system that were available at a computer graphics conference known as SIGGRAPH in 1995. <u>Exh</u> . 30 (SIGGRAPH 95 (GOOG29080-95).	Undisputed.
57. These materials describe T_Vision as a "concept" for a networked system – not a fully conceived or functional system. <i>Id.</i> , at GOOG0029083.	Disputed. Google does not dispute that the T_Vision Project materials state that the T_Vision project was "based on a concept of a transparent and world-wide broad-band, networked topography and surface data bank." Otherwise, Google disputes Skyline's characterizations of the T_Vision Project materials. See, e.g., Mewes Decl., Ex. 3 (RENDERER.HTM & TERRABAS.HTM (describing working prototype renderer and database)); Feiner Opp. Decl. ¶¶ 74-75.
58. The article states: Geometry [<i>i.e.</i> , elevation] and Billboards [<i>i.e.</i> , vector data] are stored locally." <i>Id.</i> , at GOOG0029087.	Disputed. Google does not dispute that the T_Vision Project materials state that "[t]he database basically consists of pairs of index and data files containing 128x128 pixel texture images (surface, clouds) and 16x16 point elevation data. Geometry and Billboards are not stored at other places in the current implementation, but this will change in the future." Otherwise, Google disputes Skyline's characterizations of the T_Vision Project materials. Mewes Decl.,

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	Ex. 3 (TVISION.HTL at p. 2, RENDERER.HTM at p. 1 & TERRABAS.HTM at pp. 1-2); Feiner Opp. Decl. ¶ 101.	
59. In other words, T_Vision failed to	Disputed.	
implement a remote, 3D visualization system because it could not stream the geometry data from a remote server. In those same documents, the authors confirm that the "current implementation is a very simple prototype with a very limited functionality." <i>Id</i> .	Google does not dispute that the T_Vision Project materials (in discussing the "T_Vision Database") state that "[t]he current implementation is a very simple prototype with a very limited functionality." Otherwise, Google disputes Skyline's characterizations of the T_Vision Project materials. <i>See, e.g.</i> , Mewes Decl., Ex. 3 (TVISION.HTL at pp. 1-2, RENDERER.HTM at p. 1 & TERRABAS.HTM at pp. 1-2); Feiner Opp. Decl. ¶¶ 74-75, 99-102.	
60. They admit their failure, noting that the	Disputed.	
first thing they would do with T_Vision "is to throw away all the code" and replace it. <i>Id.</i> at GOOG0029089.	Google does not dispute that the T_Vision Project materials (in discussing the "T_Vision Database") state that "[o]ne of the first things I will do is throw away all the code I have written for this prototype and replace it with a real object oriented full feature distributed high performance real time database." Otherwise, Google disputes Skyline's characterizations of the T_Vision Project materials. Mewes Decl., Ex. 3 (TERRABAS.HTM at p. 3); Feiner Opp. Decl. ¶¶ 74-75.	
61. Moreover, in the discussion of the "Realtime Renderer," the authors reference the "Task" of developing a database that utilizes "geometry and textures in real time." <i>Id.</i> at GOOG0029085.	Except as set forth below, undisputed.	
	To the extent that Skyline seeks to imply that this "task" was not actually implemented in "The (already existing and working) Prototype," Google disputes this fact. <i>See, e.g.</i> , Mewes Decl., Ex. 3 (RENDERER.HTM at p. 1-2); Feiner Opp. Decl. ¶ 74.	
B.3. The Prior Art Relied Upon By Google – Combination of Midgal and Cosman		
62. Google seeks to combine two unrelated	Except as set forth below, undisputed.	

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references: (1) U.S. Patent No. 5,760,783 entitled "Method and System for Providing Texture Using a Selected Portion of a Texture Map" (the "Migdal Patent") and (2) an article entitled "Global Terrain Texture: Lowering the Cost" by Michael Cosman (the "Cosman Article"). Exhs. 52 and 28.	Google disputes that the Migdal patent and the Cosman article were "unrelated." See, e.g., Haight Decl., Ex. 52 (Migdal patent at References Cited); Feiner Opp. Decl. ¶ 114.
63. The Migdal Patent is a cited reference on the face of the '189 Patent and was considered by the Patent Office during prosecution of the application giving rise to the '189 Patent. Exh. 1 ('189 Patent).	Undisputed.
64. The Cosman article is cited on the face	Except as set forth below, undisputed.
of the Migdal Patent, as was considered by the Patent Office during prosecution of that patent application. Exh. 52 (Migdal Patent).	To the extent that Skyline seeks to imply that Cosman was considered by the Examiner during prosecution of the '189 patent, Google disputes this fact. <i>See</i> '189 patent at References Cited.
65. Michael T. Jones, Google's Chief	Except as set forth below, undisputed.
Technology Officer and Defendants' 30(b)(6) witness, is a named inventor on the Migdal Patent. <i>Id</i> .	Michael Jones is the Chief Technologist of Google Earth, Maps, and Local for Google Inc.
66. At his deposition, Mr. Jones testified to	Disputed.
being well-versed in both the Migdal Patent and the '189 Patent. Exh. 44 (Jones Dep., pp. 57-58).	See, e.g., Haight Decl., Ex. 44 (Jones Depo. at p. 54-60); Feiner Opp. Decl. ¶ 130.
67. Mr. Jones testified during his	Disputed.
deposition that the use of "terrain" in the '189 Patent, which includes elevation data, "sets it aside" from the invention described in the Migdal Patent. <i>Id.</i> , pp. 58-59.	Haight Decl., Ex. 44 (Jones Depo. at 54-60); see also Feiner Opp. Decl. ¶¶ 109-12, 115-16; Chang Decl., Ex. 2 at GOOG 105, 108-09, GOOG 117-19, GOOG 131-32, 137 & GOOG 151-54; Haight Decl., Ex. 52 (Migdal patent at Abstract and col. 3:18-19, 6:9-19).
68. Mr. Jones testified unequivocally that the Migdal Patent was directed to "an image system" (<i>i.e.</i> , a two-dimensional	Disputed.
	Haight Decl., Ex. 44 (Jones Depo. at 54-60); <i>see also</i> Feiner Opp. Decl. ¶¶ 109-12, 115-16;

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and 3) all describe a <i>local</i> system as part of the computer graphics display system. <i>Id.</i> , Figs. 2-3; col. 6:22-24.	Feiner Opp. Decl. ¶¶ 109-12, 126; Chang Decl., Ex. 2 at GOOG 105, 108-09, GOOG 117-19, GOOG 131-32, 137 & GOOG 151-54; Haight Decl., Ex. 52 (Migdal patent at col. 7:18-21, 7:51-8:4, 10:55–11:23 & Fig. 2).
74. The "mass storage device" is further described as a hard disk drive, floppy disk or a tape drive, not a remote server. <i>Id.</i> , col. 6:33-37.	Disputed.
	Feiner Opp. Decl. ¶¶ 109-12, 126; Chang Decl., Ex. 2 at GOOG 105, 108-09, GOOG 117-19, GOOG 131-32, 137 & GOOG 151-54; Haight Decl., Ex. 52 (Migdal patent at col. 7:18-21, 7:51-8:4, 10:55–11:23 & Fig. 2).
75. Like the Migdal Patent, the Cosman Article addresses only texture (or imagery) – not elevation. Exhs. 28 (Cosman Article, p. 53) & 37 (Aug. 11, 2006 Manocha Rpt., ¶ 97).	Disputed.
	Mewes Decl., Ex. 7 (Feiner Depo. at 84:2-87:17); <i>see also</i> Feiner Opp. Decl. ¶¶ 109-12, 126; Chang Decl., Ex. 2 at GOOG 105, 108-09, GOOG 117-19, GOOG 131-32, 137 & GOOG 151-54; Haight Decl., Ex. 52 (Migdal patent at col. 7:18-21, 7:51-8:4, 10:55–11:23 & Fig. 2).
76. The Cosman Article, like the Migdal Patent, merely describes a local system like those described and disclosed in the '189 Patent. Exhs. 28 (Cosman Article, pp) Exh. 1 ('189 Patent, col. 1:54-61).	Disputed.
	Mewes Decl., Ex. 7 (Feiner Depo. at 87:24-88:13); <i>see also</i> Feiner Opp. Decl. ¶¶ 109-12, 126; Chang Decl., Ex. 2 at GOOG 105, 108-09, GOOG 117-19, GOOG 131-32, 137 & GOOG 151-54; Haight Decl., Ex. 52 (Migdal patent at col. 7:18-21, 7:51-8:4, 10:55–11:23 & Fig. 2).

Respectfully submitted, Dated: February 2, 2007

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Certificate of Service

I hereby certify that, on February 2, 2007, I caused a true and accurate copy of the foregoing document to be served upon all counsel of record for each party by complying with this Court's Administrative Procedures for Electronic Case Filing.

> By: ____/s/ Darryl M. Woo_ Darryl M. Woo